PATENT SPECIFICATION

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COMPLETE SPECIFICATION.

Improvements in Golf Clubs.

I, JOHN RHIND OGILVIE, of 32 Montgomerie Street, Edinburgh, Scotland, British Subject, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to golf clubs of the kind comprising a wooden club head having an integral hollow socket, a metallic sleeve firmly secured in said socket and extending from the sole of the club head to the upper end of the socket, the sleeve having a downwardly-tapered bore to receive a tapered metal shaft having its lower end inserted into and closely fitting the sleeve, and means for securing the shaft and sleeve in the socket against rotation relatively to one another.

It has been proposed to externally taper the sleeve in an upward direction for insertion from below into an upwardly-tapered bore in the socket of the club head and so as to project above the upper edge of the socket, where it may be wrapped with a coating of a cellulose compound which also surrounds the upper end of the socket and unites with a similar coating on the steel shaft, the lower end of the sleeve being anchored to the club head by a screw.

It has furthermore been proposed to form the sleeve with an exterior screw-thread whereby it can be screwed into a screw-threaded part of the socket and with an internal screw-thread into which a screw-threaded part of the metal shaft can be screwed, both shaft and sleeve having downwardly-tapered smooth portions and the bore in the socket having a correspondingly tapered smooth portion.

According to the present invention, a golf club of the kind described has the hollow socket formed with a downwardly-tapered bore throughout its length either in the socket itself or in a liner fitted within the hollow socket, and a tubular tapered metallic sleeve is a friction-tight fit in said bore throughout its length without being in screw-threaded engagement therewith and the sleeve has its internal surface downwardly-tapered throughout to receive the lower end of a tapered metallic shaft which is a friction-tight fit in said sleeve without being screw-threaded therein, the socket, sleeve and shaft being interlocked against relative rotation upon each other by means of a screw, pin or like device driven into the socket diametrically through the sleeve and shaft. The sleeve may protrude above the upper end of the socket, in which case it is bound to said socket by binding means comprising a metal ferrule having one end closely fitting the sleeve and its other end closely embracing the upper end of the socket.

The sleeve may be slotted or split from its upper end to within a short distance of its lower end and the open lower end of the shaft may be closed by means of a wood or other plug.

The ferrule may be bored internally so as to firmly fit the upper end of the sleeve, or the ferrule may be internally screw-threaded to engage a screw-threaded portion on the upper end of the metal sleeve and be pinned in position if required.

When the socket of the club head is fitted with a liner, this liner may be of metal and have an external upward taper and be inserted into a correspondingly tapered hole through the socket. In such case the liner is inserted into the socket from below, and the tubular metallic sleeve is fitted in the liner before the liner is inserted in the socket. The metallic shaft is thereafter inserted in the sleeve and the whole secured together by a transverse screw, pin or like device driven into the socket diametrically through the liner, sleeve and shaft.

In order that the invention may be more clearly understood reference is hereinafter made to the accompanying drawings illustrating the invention.

Fig. 1 is a view looking on the striking face of a golf club with a wooden head, the socket part being shown in section.

Fig. 2 is a side view of an unsplit metallic sleeve with a ferrule.

Fig. 3 is a side view of a split sleeve.

Fig. 4 is a view, partly in section, of a modified construction of club head.

As illustrated in Figs. 1—3 of the

drawings, the socket 4 of the golf club head 5 is bored throughout its length to receive a metal sleeve 6 which is longer than the socket 4 so as to extend beyond the upper end 7 of the socket 4. The metal sleeve 6 may be a plain tapered steel tube as shown in Fig. 2 or it may be provided with a slot or split 8 extending from its upper end to within a short distance of its lower end as shown in Fig. 3. The metal sleeve 6 is provided with a ferrule 9 which is fitted upon the sleeve before the sleeve is inserted into the socket 4 of the club head, the ferrule being adapted to fit over the upper end 7 of the socket when the sleeve 6 has been fitted in place. The metal shaft 10 is fitted into the metal sleeve 6 and the shaft and sleeve are secured against rotation in the socket 4 by means of a screw 11 passed through the shaft and sleeve into the club head.

The ferrule 9 and upper end of the sleeve 6 which extends beyond the ferrule may be covered by the usual binding twine (not shown) to give the club head a finished appearance, and the open lower end of the steel shaft 10 may be closed by means of a wood or other plug 12.

Fig. 4 shows a construction in which the socket 4 of the club head is bored throughout its length to receive a metal liner 13 which extends from end to end of the socket 4. The liner 13 may be of aluminium or other material cast on to or otherwise firmly united to an inner metal sleeve 6 to form an outer covering for the sleeve 6 which is a downwardly-tapered steel tube of uniform wall thickness through its length. The inner sleeve 6 tapers downwards externally and the bore of the outer liner 13 tapers downwards to conform to the external taper of the inner sleeve 6. The exterior of the liner 13 may be either parallel or tapered in either direction and the bore in the socket 4 will be made to conform to the exterior of the sleeve 13. In this case, the liner 13 is first united to the sleeve 6. The two are then inserted together in the bore of the socket 4, from below if the liner 13 externally tapers upwards. Thereafter the tapered steel shaft 10 is inserted through the sleeve 6 and the whole secured together by a transverse screw 11 or the like. The upper end of the socket 4 may be bound by the usual twine binding.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. A golf club of the kind described having the hollow socket of the wooden club head formed with a downwardly-tapered bore throughout its length either in the socket itself or in a liner fitted within the hollow socket, a tubular tapered metallic sleeve which is a friction-tight fit in said bore throughout its length, without being in screw-threaded engagement therewith, said sleeve having its internal surface downwardly-tapered throughout a tapered metallic shaft, the lower end of which is a friction-tight fit in said sleeve without being screw-threaded therein, and a screw, pin or like device driven into the socket diametrically through the sleeve and shaft.

2. A golf club according to claim 1 in which the sleeve protrudes above the upper end of the socket where it is bound to said socket by binding means comprising a metal ferrule having one end closely fitting the sleeve and its other end closely embracing the upper end of the socket.

3. A golf club according to either of the preceding claims in which the sleeve is split for a part of its length from its upper end.

4. A golf club according to claim 1 having the bore formed in a metallic liner fitted within the socket.

5. A golf club according to claim 4 having the metallic liner firmly united to the sleeve.

6. A golf club according to claim 4 or 5 in which the liner tapers upwards externally and is inserted from below into the socket.

7. A golf club constructed as herein described with reference to the accompanying drawings.

Dated this 2nd day of March, 1934.

JOHNSONS,
Chartered Patent Agents,
10, Stafford Street, Edinburgh,
and
41, St. Vincent Place, Glasgow.

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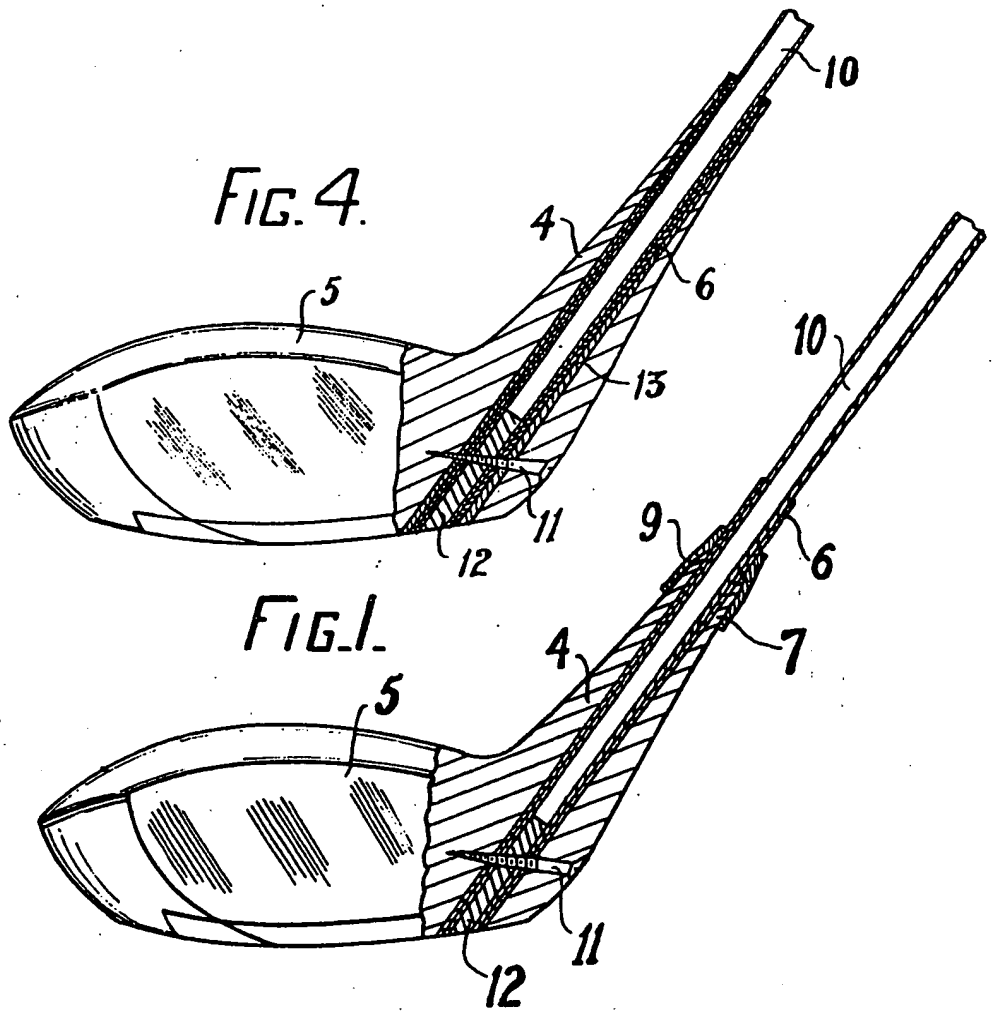

FIG. 4.

FIG. 1.

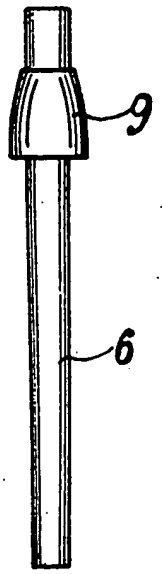

FIG. 2.

FIG. 3.

Malby & Sons, Photo-Lith.